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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,005	12/15/2003	Yi Feng Zheng	7453	2954

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EXAMINER

HAQ, SHAFIQUK

ART UNIT	PAPER NUMBER
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1641

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/736,005	ZHENG ET AL.	
	Examiner	Art Unit	
	Shafiqul Haq	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/02/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Although specific claims are cited and discussed in the rejection below, these rejections are also applicable to all other claims in which the noted problems/language occur.
2. Applicants are advised to keep a clear line of demarcation among the copending applications 10/736004, 10/736005 and 10/736018 particularly with regard to the provisos recited in the claims.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. For the claim 1 "when R¹ is not taken together to form a ring" it would be inconsistent that R¹ is "not H or lower alkyl or a protecting group". Since in that instance R¹ would be undefined (see first definitions of R¹ in claim 1)
6. Claim 8: no antecedent basis in claim 7 for "said protein".
7. Claim 1,7,13,18, 25, 32-37 recite the term "immunogenic carrier", "label" and/or "acid salts". It is not clear what "immunogenic carrier" or "label" is encompassed by the terms as immunogenic carrier may include proteins, adjuvant and other non-protein substance and label may include various labeling agent such as fluorescein,

Art Unit: 1641

cyanine, enzymes, radioactive substance, electrophoretic tag etc. Therefore, it is unclear what immunogenic carrier or label is intended by the terms.

Claim 1 and 7 is also indefinite as it is also not clear what is encompassed by the term "acid salts".

8. Claims 1, 7, 25 and 26 recite the term "protecting group". It is not clear what is encompassed by this term because "protecting group" is a general term which includes numerous groups for protection of functional groups -OH, -NH, -SH, -COOH and -CO. Therefore, the claims are vague and indefinite for not clearly defining the protecting group.
9. With respect to claims 26, 30, 31, 34 and 35, it is not clear "antibody" used in the method is raised against compound of what formula i.e against what hapten-immunogen conjugate?
10. With respect to claims 33, 36 and 37, it is not clear what is encompassed by the term "analog".
11. With respect to claims 17, 24 and 29, it is not clear what is encompassed by the terms "enzyme", "luminescer" and "radioisotopes" as these are generic terms and may include variety of enzymes, luminescers and radioisotopes.
12. The term "immunogenic protein" in claims 32, 33, 36 and 37 are confusing. It is not clear whether the "immunogenic protein" conjugated with the compound is an immunogenic carrier or it itself acts as an immunogen?

It is also unclear what is encompassed by the term "non-poly(amino acid) immunogenic carrier" in the above claims.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

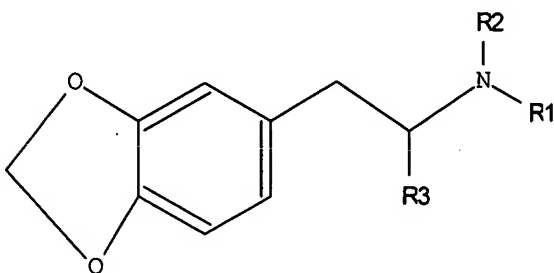
A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

14. Claims 1-12, 15, 18-29, 31, 33, 34 and 37 are rejected under 35 U.S.C. 102(a) as being anticipated by Hui et al (EP1340981 A2).

Claims recite methods, compositions and kits for detecting the presence and/or amounts of entactogens in samples.

Hui et al. disclose a method for detection of 3,4- methylenedioxy-methamphetamine, immunogen/conjugate, antibody against the immunogen and a detection kit. Hui et al. disclose the following compound against which antibody is raised (paragraphs 0006-0012) :

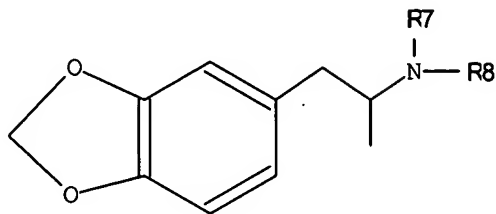


wherein R2 and R3 = alkyl group; R1=J-M-T wherein J=1-15 carbon atoms, M= -O-, -CO-, -NR4-, -S-, -NH(CS)-, -NHCONH-, maleimidothioether and T=macromolecular carrier or a label.

The above disclosure reads on the compounds of formula I and II (claim 1 and 7)

Art Unit: 1641

of the instant application:



wherein R1, R2= cycle; R3, R7=alkyl and R4 and R8 = as defined.

Hui et al. disclose that the functional group M may include other moieties such as carboxylic acids, amines, thioesters etc. besides the above disclosed groups (paragraph 0039, lines 27-32).

Hui et al. disclose immunogen bound to carrier (e.g. proteins, peptides) (paragraph 0035) for raising antibody against the immunogen (paragraphs 0034,0068-0073) and the antibodies show specificities to ecstasy drugs (paragraph 0054).

Hui et al. disclose label compounds comprising luminescent compounds; fluorescent compounds, radioactive isotopes etc. (paragraph 0022) that anticipated label compound as claimed.

Hui et al. also disclose methods/assays for detection and quantitative determination of amphetamine derivatives (paragraphs 0012, 0029, 0064-0067).

Hui et al further disclose reagent kit assembly for detection of MDMA and its methylenedioxy analogs in test samples such as biological fluids (paragraphs 0059 and 0060).

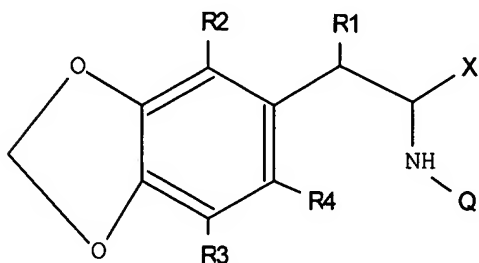
The antibodies of claim 15 are considered to be functionally equivalent of the antibodies of Hui et al., i.e. they have the same specificity. For product by process

claims see MPEP 2113.

All the above disclosure reads on all the cited claims of the instant invention and therefore, the reference is deemed to anticipate the cited claims.

15. Claims 1-12, 15, 18-29, 31, 33, 34 and 37 are rejected under 35 U.S.C. 102(a) as being anticipated by Rouhani et al. (GB 2361473 A).

Rouhani et al. disclose a method for detection of ecstasy-class analogs. Rouhani et al. disclose the following compound (page 11, lines 1-22; page 12, lines 1-3):



wherein R1-R4 = H; X=H or carbon atom; Q=-Lⁿ-Z, a first moiety or substituted derivative of the first moiety, wherein Lⁿ = backbone C, N, O, S and n is ≥ 0 ; first moiety is selected from a group consisting of a straight moiety or a branched moiety and has a backbone of m backbone atoms independently selected from a group consisting of carbon, nitrogen, oxygen, sulfur wherein $m \geq 1$ and Z=moiety capable of bonding directly or indirectly with an immunogenic carrier or a detectable label (page 12, lines 1-3) or through a linking group (page 12 lines 9-11).

The detectable label may be a radioisotope, a fluorescent group, a luminescent group, enzyme etc. (page 5, lines 22-24; page 6, lines 1-10; page 9, lines 9-17; page 12, lines 10-15 and page 12, lines 12-14) and the carrier molecule may be protein,

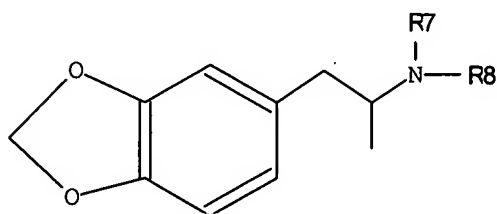
Art Unit: 1641

peptide etc. (page 13, lines 3-14; page 6, lines 1-10). Conjugation of the compound to solid particles is also disclosed (page 6, lines 14-18).

Rouhani discloses preparation of antibody (page 6, lines 19-24; pages 16-18) using the compound conjugated with carrier protein (see abstract) and different homogeneous and heterogeneous immunoassay methods (pages 8-9 and 34) and assay kit (page 31, lines 9-12 and claim 10) for detection and quantitation of ecstasy-class analogs in biological samples (page 22, lines 19-24).

Rouhani also discloses the above compound conjugated with a protein to be adapted as immunogen (page 41, example 7). Attachment to a carrier protein or a label is also inherent in the process of immunization (see claims 7 and 8) and immunoassay methods (see pages 8-9 and 34) as disclosed in this reference.

The above disclosure reads on the compounds of formula I and II (claim 1 and 7):



wherein R1, R2= cycle; R3, R7=hydrogen or alkyl and R4 and R8 = as defined in claims 1 and 7.

Reference claims disclose immunogenic carrier, label, antibody, method and kit for immunoassay detection and quantitation of ecstasy compounds which anticipates all the cited claims of the instant invention.

The antibodies of claim 15 are considered to be functionally equivalent of the

Art Unit: 1641

antibodies of Rouhani et al, i.e. they have the same specificity. For product by process claims see MPEP 2113.

Therefore, the reference is deemed to anticipate the cited claims.

Conclusion

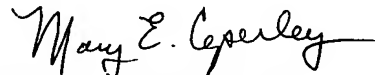
16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shafiqul Haq whose telephone number is 571-272-6103. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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